

AMENDMENTSAmendments to the Claims

Please amend the claims according to the following listing of the claims.

Listing of the claims

1. (currently amended) An apparatus for optically determining distance, wherein the apparatus comprises:
 - (i) at least one collimating optical element,
wherein the at least one collimating optical element has an optical axis; and
 - (ii) at least two focusing optical elements,
wherein each of the at least two focusing optical elements has an optical axis,
wherein the optical axes of the focusing optical elements are aligned parallel to the optical axis of the at least one collimating optical element, and
wherein at least two optical axes of the focusing optical elements are not collinear;
- wherein light is directed through the at least one collimating optical element that collimates in the direction of a reflecting surface, through the at least two focusing optical elements that focus in the

direction of the reflecting surface, and onto the reflecting surface that reflects the light.

An arrangement for optically determining the distance of a reflecting surface onto which light from a light source is directed via a first optical fiber and from which reflected light passes onto at least one statically arranged optical detector via the first optical fiber or at least one further optical fiber, characterized in that the light runs on to the reflecting surface (4) and from the reflecting surface (4) via at least one optical element (2), collimating in the direction of the reflecting surface (4), and at least two optical elements (3¹) that focus in the direction of the reflecting surface (4) and whose optical axes are aligned parallel to the optical axis of the collimating optical element (2) and are arranged at prescribed spacings from one another.

2. (currently amended) The arrangement apparatus as claimed in claim 1, characterized in that wherein several focusing optical elements (3¹) form a row arrangement along an axis or form an array arrangement in a number of rows.
3. (currently amended) The arrangement apparatus as claimed in claim 1, characterized in that wherein the focusing optical elements (3¹) are arranged equidistantly from one another.
4. (currently amended) The arrangement apparatus as claimed in claim 1, characterized in that wherein the

focusing optical elements—(3') are arranged at a constant distance from the collimating optical element—(2).

5. (currently amended) Thearrangement apparatus as claimed in claim 1, ~~characterized in that~~ wherein the focusing optical elements—(3') are constructed as cylindrical lenses.
6. (currently amended) Thearrangement apparatus as claimed in claim 1, ~~characterized in that~~ wherein the convex surfaces of the focusing optical elements—(3') are aspherically aspherically curved.
7. (currently amended) Thearrangement apparatus as claimed in claim 1, ~~characterized in that~~ wherein the collimating optical element—(2) is a plano-convex optical lens.
8. (currently amended) Thearrangement apparatus as claimed in one claim 1, ~~characterized in that~~ wherein the convex surface of the collimating optical element—(2) is aspherically aspherically curved.
9. (currently amended) Thearrangement apparatus as claimed in claim 1, ~~characterized in that~~ the wherein light is directed through a first optical fiber, through the at least one collimating optical element that collimates in the direction of the reflecting surface, through the at least two focusing optical elements that focus in the direction of the reflecting surface, onto the reflecting surface that reflects the

light through the first optical fiber to an optical detector, or optionally through a second optical fiber to an optical detector, and wherein an end face of the at least one further second optical fiber-(5), into which the reflected light can be coupled, is arranged immediately next to the an end face of the first optical fiber-(1) from which light from the a light source exits.

10. (currently amended) The arrangement apparatus as claimed in claim 1, characterized in that in the case of an arrangement where light from an end face of a first optical fiber (1) is directed onto the reflecting surface (4), and light reflected from there can be coupled into the end face of this optical fiber (1), wherein light is directed through a first optical fiber, through the at least one collimating optical element that collimates in the direction of the reflecting surface, through the at least two focusing optical elements that focus in the direction of the reflecting surface, onto the reflecting surface that reflects the light through the first optical fiber to an optical detector, or optionally through a second optical fiber to an optical detector, and wherein the apparatus further comprises a fiber brancher/backward coupler connected to the first optical fiber, such that light reflected from the reflecting surface can be coupled into the first optical fiber and can impinge on the optical detector is present for light from the light source and for reflected light to the optical detector.

11. (currently amended) The arrangement apparatus as claimed in claim 1, characterized in that wherein light is directed through a first optical fiber, through the at least one collimating optical element that collimates in the direction of the reflecting surface, through the at least two focusing optical elements that focus in the direction of the reflecting surface, onto the reflecting surface that reflects the light through the first optical fiber to an optical detector, or optionally through a second optical fiber to an optical detector, and wherein the end face(s) of the first optical fiber and/or the at least one further optical fiber-(5) is/are aligned orthogonal to the optical axis of the collimating optical element -(2).
12. (currently amended) The arrangement apparatus as claimed in claim 1, characterized in that wherein light is directed through a first optical fiber, through the at least one collimating optical element that collimates in the direction of the reflecting surface, through the at least two focusing optical elements that focus in the direction of the reflecting surface, onto the reflecting surface that reflects the light through the first optical fiber to an optical detector, or optionally through a second optical fiber to an optical detector, and wherein the first optical fiber-(1) and/or the at least one further optical fiber-(5) is/are in each case aligned at an obliquely inclined angle with reference to the optical axis of the collimating optical element-(2).

13. (currently amended) The arrangement apparatus as claimed in claim 1, ~~characterized in that wherein light is directed through a first optical fiber, through the at least one collimating optical element that collimates in the direction of the reflecting surface, through the at least two focusing optical elements that focus in the direction of the reflecting surface, onto the reflecting surface that reflects the light through the first optical fiber to an optical detector, or optionally through a second optical fiber to an optical detector, and wherein the first optical fiber-(1) and/or the at least one further optical fiber-(5) is/are arranged offset from the optical axis of the collimating optical element-(2).~~
14. (currently amended) The arrangement apparatus as claimed in claim 1, ~~characterized in that wherein light is directed through a first optical fiber, through the at least one collimating optical element that collimates in the direction of the reflecting surface, through the at least two focusing optical elements that focus in the direction of the reflecting surface, onto the reflecting surface that reflects the light through the first optical fiber to an optical detector, or optionally through a second optical fiber to an optical detector, and wherein a transmission grating is constructed on the end face of the first optical fiber-(1).~~
15. (previously presented) The arrangement apparatus as claimed in claim 1, ~~characterized in that wherein the light originates from a light source, and wherein the~~

light source is an LED or a laser diode.

16. (currently amended) The arrangement apparatus as claimed in claim 1, ~~characterized in that wherein~~ the reflecting surface-(4) is a part of a pellicle or is arranged on a pellicle.
17. (currently amended) The arrangement apparatus as claimed in claim 1, ~~characterized in that wherein~~ free spaces are present between focusing optical elements -(3') or through holes-(7, 7') are constructed.
18. (currently amended) The arrangement apparatus as claimed in claim 1, ~~characterized in that wherein~~ at least one further beam-shaping optical element-(6) is arranged between a collimating optical element-(2) and focusing optical elements-(3'), or beam-shaping elements are integrated in the collimating optical element-(2).
19. (currently amended) The arrangement apparatus as claimed in claim 18, ~~characterized in that wherein~~ the beam-shaping optical element-(6) is a telescope array arrangement.
20. (currently amended) The arrangement apparatus as claimed in claim 18, ~~characterized in that wherein~~ the beam-shaping optical element(s)-(6) is/are diffractive or refractive optical elements.
21. (currently amended) The arrangement apparatus as claimed in claim 1, ~~characterized in that wherein~~ the

arrangement apparatus forms an optical microphone.